CS KICKSTART

UTSA CS PHD STUDENTS RECEIVE DOCTORAL DEGREES

Pictured from left to right, CS Department Chair Dr. Rajendra Boppana, CS Professor Dr. Jianwei Niu, PhD recipient Rocky Slavin, CS Assistant Professor Dr. Abdullah Muzahid, PhD recipient Marcus Pendleton, PhD recipient Riad Akram, and PhD recipient Mohammad Alam. The UTSA College of Science hosted a reception to honor recognize graduating doctoral students and their academic faculty advisors. Five doctoral degrees were awarded from the Department of Computer Science in the Fall 2017 semester.

CS DEPARTMENT RECEIVE GRANTS TO EMPOWER STUDENT SUCCESS

Three Computer Science department faculty and staff have received grant awards to aid UTSA student success. The UTSA Office of Information Technology (OIT) awarded approximately $150,000 in grants to projects submitted by seven colleges across the university through its Academic Support Solutions Fund. The awards, which range from $5,000 to $15,000, will help subsidize the costs of initiatives to empower student success at the Main and Downtown Campuses.

"I think it is a great idea to make these funds available for small student-focused projects which support UTSA's vision," said Dan Smolenski, UTSA computer science computing manager. "The OIT Academic Support Solutions Fund is a good way for the faculty and staff that work closely with students and know their needs to get projects funded, which directly supports the students. This in-turn helps to increase our retention and graduation rates."

The awarded projects from the Department of Computer Science include:

- "Testbed for Unix and Network Security Research and Education" by Dr. Ali Tosun, Associate Professor of Computer Science

- "System Support for Education and Research in Big-Data Application with Non-CPU Devices" by Dr. Wei Wang, Assistant Professor of Computer Science

- "Security Course Virtualization" by Dr. Dan Smolenski, Computer Science Computing Manager and Director of CS Computing Facilities

DID YOU KNOW…?

The first actual computer "bug" was identified in 1947 as a dead moth. It was stuck in a Harvard Mark II computer.

Source:
Taylor, Alexander L., III
(16 April 1984) "The Wizard Inside the Machine". TIME.

MURTUZA JADLIWALA JOINS UTSA CS DEPARTMENT

Dr. Murtuza Jadliwala

Dr. Murtuza Jadliwala joined the UTSA Department of Computer Science as an Assistant Professor starting Spring 2018.

Jadliwala earned his bachelors degree in Computer Engineering from Mumbai University in 2000 and both his masters and doctoral degrees in Computer Science in 2004 and 2008 respectively from the State University of New York at Buffalo.

His research interests are broadly in the area of systems and network security and privacy, where he is currently investigating security and privacy threats in human-centered and mobile cyber-physical systems, such as wearable devices, and in socio-technical systems, such as online social networking and crowd-sourcing services.

Jadliwala directs the Security, Privacy, Trust, and Ethics (SPriTE) lab at UTSA, where he and his team will conduct basic and applied research in all areas related to systems and network security and privacy.

Besides graduate research and education, an important mission of the SPriTE lab is to involve undergraduate and high-school students, especially minority and under-represented students, in security and privacy research by means of specialized camps and research opportunities.

Jadliwala's research has been funded by the National Science Foundation (NSF), the Air Force Office of Scientific Research (AFOSR), and the Air Force Research Laboratory (AFRL) Information Institute. He was selected as an AFOSR Summer Faculty Fellow in 2015.

COMPUTER SCIENCE DEPARTMENT
SPRING PICNIC
BONNIE CONNER PARK

❖ All are welcome — students, staff, faculty, and friends and family
❖ Plenty of food
❖ Games (frisbee, croquet, giant jenga, egg on spoon race, and a scavenger hunt). Prizes will be awarded to winning teams.
❖ Bring folding chairs and blankets

DATE: SAT APRIL 21ST
TIME: 11 AM - 3 PM

BONNIE CONNER PARK
SAN ANTONIO

Come join us!
RSVP to cs@utsa.edu by Friday, March 31st.

Also let us know the number of guests you will be bringing, as well as any food restrictions.

LIU RECEIVES $51K MOZILLA RESEARCH GRANT

Dr. Tongping Liu

UTSA assistant professor of computer science Dr. Tongping Liu was selected to receive a grant in the amount of $51,000 from the Mozilla Corporation's 2017H2 Mozilla Research Grants.

His project, titled "Guarder: Defending Heap Vulnerabilities with Flexible Guarantee and Better Performance," aims to design a novel secure heap allocator (called Guarder) that can significantly alleviate security attacks.

Guarder will impose negligible performance overhead, while providing the highest security protection among all existing allocators. Liu and his group are working hard to make Guarder be integrated into Mozilla Firefox and other browsers, which will have a direct impact on everyone.

The 2017H2 Mozilla Research Grants is a competitive grant with the purpose of supporting projects that embody Mozilla's mission to make the Internet safer, more empowering, and more accessible. Liu is one of fourteen projects that have been funded this round.

The Mozilla Research Grants program is part of Mozilla's Emerging Technologies commitment to being a world-class example of inclusive innovation and impact culture-and reflects Mozilla's commitment to open innovation, continuously exploring new possibilities with and for diverse communities.

**For more information about
Dr. Liu and his research, visit:**
http://www.cs.utsa.edu/~tongpingliu/

FEATURED PHOTO:
CITI GLOBAL INFO SECURITY WOMEN'S PANEL HOSTED BY UTSA ACM-W

UTSA ACM-W partnered with Global Information Security Analysts from Citi to host an on campus information session for students. While the session did discuss how to propel females in tech careers, all students who were interested in information security career paths were welcome to attend and find out about opportunities. For more info on ACM-W, email acmw.utsa@gmail.com

ALUMNI SPOTLIGHT: REHAN AKBANI AT THE UNIVERSITY OF TEXAS MD ANDERSON CANCER CENTER

Dr. Rehan Akbani is an associate professor for the Department of Bioinformatics and Computational Biology at the University of Texas MD Anderson Cancer Center.

"As a tenured professor at MD Anderson the bulk of my work involves research in cancer, along with some teaching and administrative components," Akbani explained. "In addition, I give a few lectures in the Graduate School of Biomedical Sciences (GSBS), which MD Anderson is a major component of."

Dr. Rehan Akbani

Originally from Pakistan, Akbani attended the University of Texas at San Antonio (UTSA) straight out of high school and earned his Bachelors of Science with Honors (Summa Cum Laude) and Masters of Science in Computer Science in 2002 and 2005, respectively. He earned his doctoral degree in Computer Science from UTSA in 2009 with CS associate professor Dr. Turgay Korkmaz as his academic advisor.

"Once I graduated with a BS, I applied for direct admission into the [UTSA] PhD program because I wanted to pursue a research career path," Akbani said. "I loved the environment, the warm weather, the friendly people and knowledgeable faculty, [so] I decided to stay there for my PhD."

While Akbani specialized in artificial intelligence, machine learning, and network security during his doctoral studies, he now specializes primarily in the bioinformatics field of research with applications in cancer research.

"Although my formal training is in computer science, I used to read biology books on my own for the love of the subject," Akbani said. "Bioinformatics seemed like the perfect juxtaposition of the two subjects and it was an emerging field of research at the time I graduated."

Akbani currently leads several research projects and participates in various enterprises at MD Anderson.

"At the moment, I'm leading a 'Pan-Gynecologic and Breast cancers" project whose aim is to study molecular similarities and differences among breast and gynecologic cancers [such as] ovarian, uterine, and cervical cancers," Akbani said. "Those molecular similarities may eventually allow oncologists to apply therapies that are successful in one disease type to another disease type with the same vulnerabilities."

Akabni's study involves samples from over 2,500 patients and is the first of its kind, both in terms of number of patients and in terms of data points per patient. His team of researchers consists of over 60 major authors and several hundred consortium authors across dozens of institutions.

"The challenge of studying Big Data is that you have large matrices of numbers that you need to extract useful information from," Akbani

said. "My lab mostly uses R language because of its extensive statistics functionality, along with some Perl, Python, and Java. Data mining and machine learning techniques are crucial to the work."

Due to the massive levels of data that his team works with, many of the computational tasks performed are CPU and memory intensive. At MD Anderson, Akbani and his team have access to high performance computing clusters and multi-core servers, which is vital for efficient parallel programming.

"I wanted to do research that would have a real impact, and this research felt like it was worth spending a lifetime on."

Along with the skills acquired from his academic coursework, Akbani recalled valuable advice from one of his previous UTSA computer science faculty members that had a positive impact on his life.

"My CS professor, Dr. Neal R, Wagner, once told me when I was an undergraduate [that] whatever technologies you're learning in school will become obsolete by the time you graduate," Akbani said. "Therefore, we're not training you to work in the field. We're training you so that you can train yourself."

Nowadays, even middle and high schoolers are learning how to program and fix technical problems on their computers. Employers will look for employees who can find solutions to the problems where many have failed to fix.

"I've taken that advice to heart whenever I need to approach my supervisor [about] a problem or hurdle," Akbani said. "I always make it a point to either solve the problem before the meeting, or at least offer potential solutions."

For those interested in pursuing an academic or research career in computer science, Akbani highly recommends developing excellent writing skills.

"Your research may have generated fantastic results, but if reviewers aren't able to understand what you did and what the impact of your findings is, you will not get the grant or publication you're looking for."

Additionally, presentation skills are paramount to succeed in the workforce.

"Short 5-minute presentations are much harder to give than 30 or 60 minute presentations, because you need to convey your point quickly and succinctly without losing your audience," Akbani explained. "I would encourage students to attend seminars or workshops offered at UTSA."

THE UNIVERSITY OF TEXAS
MD Anderson Cancer Center | **UTHealth**
The University of Texas
Health Science Center at Houston

Graduate School of Biomedical Sciences

For more information about the MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, visit:
https://gsbs.uth.edu/

MUZAHID JOINS NSF AND INTEL JOINT RESEARCH CENTER BOARD OF ADVISORS

Intel and the National Science Foundation (NSF) are partnering to establish up a new research center called the Computer Assisted Programming for Heterogeneous Architectures (CAPA).

Dr. Abdullah Muzahid, assistant professor in the UTSA Department of Computer Science, was selected as a board member to provide feedback on conducted CAPA research.

His groundbreaking research and deep understanding of the systems and application of machine learning drew the attention of the Intel and NSF partners.

Dr. Abdullah Muzahid

Muzahid will be one of the few external academic members of the board, contributing his expertise and give recommendation on suggested future directions for the new center.

Recently, Muzahid received a seed grant from Intel Corporation in April 2017, an NSF CAREER award in the amount of $450K, and another NSF grant of around $250K.

The three year project will provide Muzahid a unique opportunity to establish connections with Intel and potentially provide future collaborative opportunities.

LIU AND WANG PRESENT AT 38TH ACM SIGPLAN CONFERENCE ON PLDI 2018

UTSA assistant professors of computer science Dr. Tongping Liu and Dr. Wei Wang recently submitted a paper to be published in the 38th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI) proceedings.

PLDI is the premier forum for researchers, developers, practitioners, and students in the design and implementation of Programming Language. Their paper, titled "iReplayer: In-situ and Identical Record-and-Replay for Multithreaded Applications," aims to identically replay multithreaded programs in the original process, under the in-situ setting.

The novel in-situ and identical replay makes IdealReplay more likely to reproduce errors, and allows it to directly employ debugging mechanisms (e.g. watchpoints) to aid failure diagnosis. IdealReplay implements multiple methods to reduce its performance and support identical replay.

Currently, IdealReplay only incurs around 3% performance overhead, which allows it to be always enabled in the production environment. It will enable a range of possibilities, such as automatic failure analysis and error prevention.

PLDI 2018 will take place June 20-22 in Philadelphia, Pennsylvania.

The ACM International Collegiate Programming Contest (ICPC) team will be meeting

Saturdays from 10AM - 1PM
(NPB 4.140)

All are welcome to stop by
(even if you do not plan on competing)

Great opportunity to practice programming and solving problems!

UTSA COMPUTER SCIENCE SCHOLARSHIPS AVAILABLE

NSF Scholarship for Service

The Scholarship for Service (SFS) program is funded by NSF and provides support for individuals pursuing a computer or cyber security program.

Eligibility:

- Must be enrolled on a full-time basis as an undergraduate or graduate student and be actively pursuing a major degree, minor degree, or concentration in computer or cyber security at UTSA.

- Must be within three years of completion of your program.

- Must have two letters of recommendation from faculty members at UTSA or another institution.

- Ability to obtain a U.S. high level security clearance strongly preferred

- Must have a minimum of a 2.8 GPA (undergraduate) or 3.2 GPA (graduate).

- Must be able to meet the established criteria for U.S. federal employment.

For more information, and how to apply, visit
http://www.cs.utsa.edu/undergrad/
nsf-scholarship-for-service-sfs/

FACULTY SPOTLIGHT: Q&A WITH DR. JOHN QUARLES

Reprinted from UTSA Today

John Quarles is an associate professor of computer science at The University of Texas at San Antonio (UTSA). He specializes in using cutting edge technology to create video games and other devices to help people in need.

Last year, he received a $250,000 grant from the National Science Foundation for his game, "Shark Punch," an aquatic virtual reality game for people with multiple sclerosis. This year, he's created an augmented reality program to train first responders and has teamed up his game development students with a local nonprofit, Gamers4Vets, creating video games for injured veterans.

Dr. John Quarles

Can you talk about the project you're currently most excited to be working on?

We are partnering with a local rehabilitation institute, the Teleton Children's Rehabilitation Institute, to use our virtual reality aquatic therapy games to help kids with disabilities. We are planning to adapt some of our lab's current games so they can be used for rehabilitation by children with disabilities such as cerebral palsy.

Our first project together is going to be an in-water virtual reality game where the player plays the role of a frog that jumps on lily pads in a pond to catch bugs. For this effort, I'm collaborating with Paula Geigle, adjunct assistant professor of neurology at the University of Maryland and a renowned clinician and expert in aquatic therapy research.

How has your personal journey influenced your work?

I have multiple sclerosis, which directly influenced my choice to research assistive technology such as virtual reality and augmented reality for rehabilitation. One of the games I created in that arena is called Shark Punch. It's a therapeutic underwater virtual reality game aimed at people with multiple sclerosis. Many people with MS get overheated when exercising, which can make the symptoms worse. Exercising in the pool keeps the body's temperature down and helps with balance.

What is the most important thing going on in your field that no one is talking about?

Virtual reality is great, but its not accessible to many persons with disabilities. There needs to be more research and development toward making virtual reality universally usable.

This past semester, I encouraged students in my game development class to use their skills to create a game tailored to the abilities and interests of a specific injured veteran. The results were very impressive. Some of my students even took the opportunity to use virtual reality devices to make their games accessible to veterans who otherwise wouldn't be able to play video games.

What advice do you usually give to your students?

Network, network, network. The connections you make in the professional world are invaluable. Take as many opportunities as you can to reach out to people in the field that you want to be a part of.

What do you think makes UTSA unique?

Our diversity. UTSA is diverse in so many different ways, but what is most exciting is the fact that our students come from so many different walks of life—so many different cultures—and that contributes to a very unique, inclusive community.

If you weren't an associate professor of computer science, what career do you think you would have?

I'd be a research scientist at a government lab making simulations to better train soldiers. Back in 2009, I actually had an offer from the Army that I turned down to take the assistant professor position at UTSA.

A screenshot from Quarles' game, "Shark Punch"
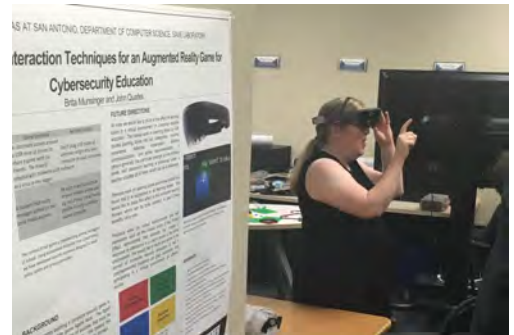
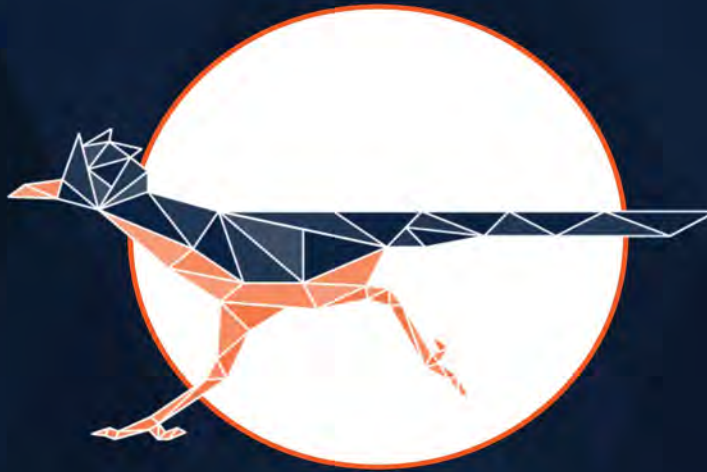UTSA CS PhD student Brita Munsinger demonstrates the augmented reality research conducted in the SAVE lab.

Gamers4Vets is a local nonprofit organization that helps veterans rehabilitate through gaming.

For more information about Dr. Quarles and his research, visit:
http://www.cs.utsa.edu/~jpq/

ROWDYHACKS

HOSTED BY **THE ASSOCIATION FOR COMPUTING MACHINERY**

WHAT THE HACK IS IT?

- ▶ **24-hour** competitive programming event
- ▶ Team of **4**
- ▶ "**Hack**" together a website, app, or tool
- ▶ No coding experience needed

WHO IS ELIGIBLE?

Undergraduate students
- ▶ Computer Science
- ▶ Information Systems / Cyber Security
- ▶ Engineering

HOW DO I PARTICIPATE?

Register at **rowdyhacks.org** starting February 26th

QUESTIONS?

Contact us at **team@rowdyhacks.org**

START	END	WHERE
07 APRIL SATURDAY 10:00 AM	**08** APRIL SUNDAY 03:00 PM	**GEEKDOM** 105 SOLEDAD ST. SAN ANTONIO, TX 78205

TOTAL PRIZE VALUE OF
$2,000

geekdom   COX AUTOMOTIVE™   AIR FORCE CIVILIAN SERVICE   USAA®   MOTIVA   Infosys be more

Visit us on the web!
http://www.cs.utsa.edu/

Go here >>>

for all archived newsletters >>>

Featured Job Opportunities!

#	Employer	Job Title	Type	Application Deadline	How to Apply
1	UT Health Science Center at San Antonio	HRIS Analyst	Full Time	March 1st at 5:00 pm	Apply via UTSA Handshake
2	Accenture	Federal - Entry Level System Developer Associate	Full Time	March 5th at 11:30 pm	Apply via UTSA Handshake
3	WellMed Medical Management	Various Internships (Paid)	Full Time Internship	March 6th at 11:59 pm	Apply via UTSA Handshake
4	NuStar Energy	Intern—Information Systems (Paid)	Full Time Internship	March 23rd at 12:00 pm	Apply via UTSA Handshake
5	Kumon Math And Reading Centers	Grader	Part Time	March 25th at 6:00 pm	Apply via UTSA Handshake
6	Texas A&M Transportation Institute	Data Processing and Development of Macros and Windows Applications	Part Time	April 1st at 4:00 pm	Apply via UTSA Handshake
7	RSM US LLP	2018 Summer Externship - Pathways	Part Time Experiential Learning	April 1st at 11:00pm	Apply via UTSA Handshake
8	Texnology Possibilities Corp	Robotics Clubs USA – Instructor	Part Time	May 31st at 5:30pm	Apply via UTSA Handshake

VISIT UTSA'S CAREEREDGE WEBSITE

http://careercenter.utsa.edu/

FOR MORE GREAT OPPORTUNITIES LIKE THESE!!!

Upcoming Computer Science Events Spring 2018

UTSA March into your Major Fair
Thurs Mar 22nd, 10:00am-2:00pm – UTSA Student Union

UTSA Spring 2018 Summer Jobs Fair
Wed Mar 28th, 9:00am-1:00pm – UTSA Student Union

CS Career Development: Career Survival for Graduating Seniors
Fri Apr 6th, 3:00pm-4:30pm – TBD

UTSA Undergraduate Research & Creative Inquiry Showcase
Thur April 19th, 10:00am-2:00pm – Convocation Center

FOR MORE CS EVENTS, VISIT CS.UTSA.EDU

Have Questions?

Story Ideas?

Photos?

Email the editor at

cs@utsa.edu

Kimberly Ward